IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/788,593 Art Unit: 2627

Filing Date: 02/26/2004 Examiner: WATKO, JULIE ANN

First Named Inventor: Andre S. Chan

Title: **DATA RECORDING DISK DRIVE WITH NONPLANAR PLATE SURFACES FOR DAMPING OUT-OF-PLANE DISK VIBRATION**

DECLARATION BY ALL INVENTORS OF PRIOR INVENTION IN THE UNITED STATES TO OVERCOME CITED PATENT (37 CFR §1.131)

We, the undersigned inventors of the subject matter claimed in the above-identified patent application, declare as follows:

1. This declaration is to establish completion of the invention in this application in the United States on a date prior to December 19, 2003, which is the filing date in the United States of U. S. Patent 7,064,921 B1 (Yang et al.), which was cited by the Examiner to reject claims of this application under 35 USC §102(e) and 103(a).

2. We are all of the inventors of the subject matter of pending claims 1-5 inclusive, 10 and 12 in the above-identified patent application filed February 26, 2004.

3. A supplement to a Hitachi Global Storage Technologies (HGST) invention disclosure numbered HSJ8-2003-0399 describing the invention that is claimed in the pending claims of this application was written prior to December 19, 2003 and was submitted to HGST's Intellectual Property Law department in San Jose, California, USA prior to December 19, 2003.

4. Attached as Exhibit A to this Declaration is a copy of this supplement titled "Post Disclosure Information for HSJ8-2003-0399" with dates marked out. The figure titled "Fig. A1 dimpled damping plate" on Exhibit A is substantially identical to Fig. 6A in our above-identified patent application.

5. The conception and all work in reducing to practice the invention of pending claims 1-5 inclusive, 10 and 12 in our above-identified patent application occurred in the United States.

6. From the above statements and attached document it can be seen that the invention of pending claims 1-5 inclusive, 10 and 12 in the above-identified patent application was made in the United States prior to the effective date of the cited reference.

7. Each of us hereby further states that all statements made herein of his own knowledge are true and all statements made on information and belief are believed to be true, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and with the knowledge that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

This declaration was executed by each of us in San Jose, California, USA on the date indicated below our respective names.

Andre S. Chan
Date: 9/25/2006

Ferdinand Hendriks
Date: 9/25/2006

Toshiki Hirano
Date: 9/25/2006

Manoj Keshavan
Date: 9/25/2006

Post Disclosure Information for HSJ8-2003-0399

Prepared for and/or by an Hitachi Attorney - Hitachi Confidential

Created By Ferdi Hendriks [redacted]
Last Modified By Ferdi Hendriks [redacted]

Required fields are marked with the asterisk (*) and must be filled in to complete the form .

The following people are responsible for these comments Ferdi Hendriks/US/HGST

The quintessential problem addressed by the damper plate invention is to achieve both low flow induced vibration (FIV) and low running torque. While running torque is easily quantified and measured, flow induced vibrations are not. One possible measure of the risk of flow induced vibration is the "Max Norm of the Eddy Viscosity" in the aerodynamic flow field. The main advantage of this FIV measure is that it is a single number (scalar) which does not depend on the vibrating structures in the file.

While we have extensively studied the behavior of grooved damper plates with various groove configurations, the range of beneficial geometries is much larger. We present additiona embodiments as shown in Fig. A1 through A3 representing Damper plates with dimples, tepered plates and plates with aerodynamic riblets. The latter are shallow (fraction of a mm) ridges aimed at reduction of turbulent shear stress. The ridges are of various cross sectional shapes such as rectangular or triangular. It should be understood that in all damper plate embodiments, the inner diameter is a design parameter. In general, the larger the Reynolds number of the file (e.g. peripheral disk speed times disk radius divided by kinematic viscosity) the smaller the inner diameter of the damper plate.

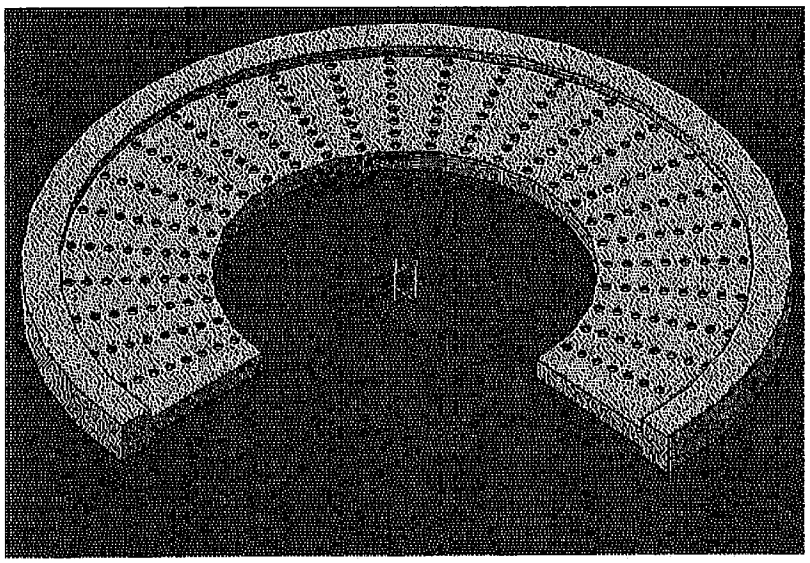

Fig. A1 Dimpled damping plate

EXHIBIT A (pg. 1 of 1)